IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re patent application of:

Berthold et al.

| MMB Docket No. 1890-0053 | Examiner: To be assigned
| Application No. 10/774,338 | Group Art Unit: 2812
| Filed: February 6, 2004 | |
| For: Method for a Parallel Production | of an MOS Transistor and a |

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on

September 9, 2004

(Date of deposit)

James D. Wood

Name of person mailing Document or fee

Signature

)

September 9, 2004

Date of Signature

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Bipolar Transistor

Sir:

Pursuant to 37 CFR §1.56, Applicant hereby discloses the following references, copies of which are enclosed, regarding the above-identified patent application.

Patent References

U.S. Patent No.	<u>Inventor</u>	Issue Date
5,354,699	Ikeda et al.	October 11, 1994
5,641,692	Miwa et al.	June 24, 1997
5,824,560	Van Der Wel et al.	October 20, 1998
5,970,332	Pruijmboom et al.	October 19, 1999
6,001,676	Sawada, et al.	December 14, 1999
6,103,560	Suzuki	August 15, 2000

Commissioner for Patents September 9, 2004 Page 2 of 3

6,440,787 B1

4"

Foreign Application	Issue Date	Country
JP 63-244768	October 12, 1988	Japan
JP 5-6961	January 14, 1993	Japan
WO 96/30940	October 3, 1996	PCT
WO 96/30941	October 3, 1996	PCT
EP 0 746 032 A2	December 4, 1996	Europe
EP 0 851 486 A1	January 7, 1998	Europe
JP 2001203288	July 27, 2001	Japan
JP 200040758	February 8, 2000	Japan

Yoshihisa

August 27, 2002

Articles

1) Widmann, Mader, Friedrich, "Technologie hochintegrierter Schaltungen", Springer Verlag, 1996.

The above-identified documents include those documents cited in the international examination procedure, including those cited in an International Preliminary Examination Report (English language copy enclosed) and International Search (copy enclosed), in a related PCT patent application number PCT/EP02/07313 filed on July 2, 2002, and prior art cited in the national examination of related applications. English translations of the Abstracts for JP 5-6961, JP 63-244768, and JP 2001203288 are also enclosed.

- U.S. Patent No. 6,103,560 claims priority to EP 0 851 486 and may provide additional information.
- U.S. Patent No. 5,824,560 claims priority to WO 9630940 and may provide additional information.
- U.S. Patent No. 5,970,332 claims priority to WO 9630941 and may provide additional information.
 - U.S. Patent No. 6,440,787 is an English language equivalent of JP 2001203288.

JP 200040758 discloses a method for producing MOS transistors and bipolar transistors. On a surface of a silicon substrate, electrodes are structured in a MOS region and electrodes are structured in a bipolar region. Sidewalls are generated at lateral surfaces of the structured electrodes which are subsequently removed in order to perform a doping of the drain and source portions.

Commissioner for Patents September 9, 2004 Page 3 of 3

"Technologie hochintegrierter Schaltungen", Widmann, Mader, Friedrich, Springer Verlag, 1996 discloses a BICMOS-process wherein a substrate is doped by iron implantation in order to produce conductive regions in the substrate. A silicon layer is produced after doping the substrate whereon an Si₃N₄ material is deposited on the silicon oxide layer. The Si₃N₄ layer is etched in order to allow a local oxidation whereafter the layer is removed. Collector terminals are produced by iron implantation via a structured photo resist layer. The photo resist layer is removed and a second photolithographic process using a second mask is performed in order to define the base zone of the bipolar transistors. The second photo resist layer is removed and a gate oxide is generated for the MOS transistors. A polysilicon gate layer is deposited and a further mask is used in order to define the gate. The source and drain regions are doped by iron implantation whereeafter an isolating oxide layer is generated in order to produce the dielectric layer of a capacitor. A second polysilicon layer is deposited for generating of the capacitor and high resistance resistors. The second polysilicon layer is etched to structure this polysilicon layer and a silicon oxide etching is performed in order to generate contact holes. A metal is deposited and etched in order to contact active regions of the device.

It is believed that no fees are due for the consideration of this Information Disclosure Statement. However, the Commissioner is hereby authorized to charge any deficiency or to credit any overpayment to Deposit Account No. 13-0014, but not to include any payment of issue fees.

September 9, 2004 Maginot, Moore & Beck Bank One Center Tower 111 Monument Circle, Suite 3000 Indianapolis, Indiana 46204-5115 (317) 638-2922 Respectfully Submitted

James D. Wood
Attorney for Applicants
Registration No. 43,285

FORM PTO-1449 INFORMATION DISCLOSURE STATEMENT

SEP 1 3 2004 33	
PA THADEMARK	

	Page 1 of 2
MMB DOCKET NO. 1890-0053	APPLICATION NO.: 10/774,338
APPLICANT(S): Berthold et al.	
FILING DATE: February 6, 2004	GROUP ART UNIT: 2812

				U.S. PAT	ENT DOCUMENTS			
EXAMINER INITIAL			OCUMENT JMBER	DATE	NAME	CLASS	SUB-CLASS	FILING DATE
	AA	5,3	54,699	October 11, 1994	Ikeda et al.			
	AB	5,6	41,692	June 24, 1997	Miwa et al.			
	AC	5,8	24,560	October 20, 1998	Van Der Wel et al.			
	AD	5,9	70,332	October 19, 1999	Pruijmboom et al.			
	AE	6,0	01,676	December 14, 1999	Sawada et al.			
	AF	6,1	03,560	August 15, 2000	Suzuki			-
	AG	6,4	40,787 B1	August 27, 2002	Yoshihisa			
	AH							
	AI							
	AJ			17				
	AK							
								I
EXAMINER INITIAL		DOCUMENT NUMBER		DATE	COUNTRY	CLASS	SUB-CLASS	TRANSLATION
	AL	JP :	5-6961	January 14, 1993	Japan			Yes No
	AM	JP (63-244768	October 12, 1988	Japan			Yes No
	AN	EP	0 746 032 A2	December 4, 1996	Europe			Yes No
	AO	JP 2	2001203288	July 27, 2001	Japan			Yes No
	AP	JP 200040758		February 8, 2000	Japan			Yes No
			ОТІ	IER (Including Autho	r, Title, Date, Pertinent I	Pages, etc.)	100	
	AQ	1	Widmann, M	ader, Friedrich, "Techn	ologie hochintegrierter Scl	haltungen", Sprin	ger Verlag, 1996)	
	AR	1						
	AS	1						
EXAMINER						DATE C	ONSIDERED	

FORM PTO-1449 INFORMATION DISCLOSURE STATEMENT

	OIPER
BAS	SEP 1 3 2004
. 19	RADEMARKO

	Page 2 of 2
MMB DOCKET NO. 1890-0053	APPLICATION NO.: 10/774,338
APPLICANT(S): Berthold et al.	
FILING DATE: February 6, 2004	GROUP ART UNIT: 2812

			U.S.	. PATENT DOCUMENT	S		
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB-CLASS	FILING DATE
	BA						
	BB						-
	BC						
	BD					-	
	BE						
	BF						
	BG						
	ВН						
	BI						
	ВЈ						
	BK						
							<u> </u>
EXAMINER NITIAL		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB-CLASS	TRANSLATION
	BL	WO 96/30940	10/03/1996	PCT			Yes No
9=	ВМ	WO 96/30941	10/03/1996	PCT			Yes No
	BN	EP 0 851 486 A1	01/07/1998	Europe			Yes No
	ВО						Yes No
	BP						Yes No
		OT	HER (Including	Author, Title, Date, Perti	nent Pages, etc.)		
	AQ	2					
	AR	2				<u>.</u>	
	AS	2					
XAMINER			***		DATE C	ONSIDERED	